

CLAIMS

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

5 an electronic component in plate form including an external electrode; and
 a substrate which includes, on a main surface thereof, an interconnect electrode electrically connected to the external electrode and on the main surface of which the electronic component is mounted,

 wherein the external electrode and the interconnect electrode are securely adhered
10 together with a solder material containing tin and zinc, and
 the plane shape of the external electrode is a circular shape.

 2. The device of claim 1, wherein the plane shape of the external electrode is a circle or an ellipse with a ratio of the minor diameter to the major diameter of from 1/2 to 1 inclusive.

15 3. The device of claim 1, wherein the plane shape of the interconnect electrode is a circle or an ellipse with a ratio of the minor diameter to the major diameter of from 1/2 to 1 inclusive.

 4. The device of claim 1, wherein the solder material contains bismuth.

 5. The device of claim 1, wherein a metal film made of palladium is formed
20 between the external electrode and the solder material.

6. A semiconductor device comprising:

 an electronic component in plate form including an external electrode; and
 a substrate which includes, on a main surface thereof, an interconnect electrode electrically connected to the external electrode and on the main surface of which the
25 electronic component is mounted,

 wherein the external electrode and the interconnect electrode are securely adhered together with a solder material containing tin and zinc, and

the plane shape of the external electrode is a rectangular or square shape with a ratio of the short side to the long side of from 1/2 to 1 inclusive.

7. The device of claim 6, wherein the plane shape of the interconnect electrode is a rectangle whose corners are rounded.

5 8. The device of claim 6, wherein the solder material contains bismuth.

9. The device of claim 6, wherein a metal film made of palladium is formed between the external electrode and the solder material.